Amendment to the Claims:

This listing of claims will replace all prior listing of claims in this application.

Listing of Claims:

CLAIMS

1. (Currently amended) A method of self-supported transfer of a thin film, the method comprising:

preparing a source substrate;

implanting at least a first species of ions or gas at a first dose in ~~a~~ the source substrate at a specified depth with respect to a face of the source substrate, wherein the first species generates defects;

applying a stiffener in intimate contact with the source substrate,

applying a heat treatment to the source substrate, at a specified temperature for a specified time, so as to create, substantially at the given depth, a buried weakened zone, without initiating a thermal splitting of the thin film; and

applying a pulse of energy to the source substrate so as to provoke a self-supported splitting of the thin film delimited between the face of the source substrate and the buried weakened ~~layer~~ zone, with respect to a remainder of the source substrate.

2. (Currently amended) The method according to claim 1, wherein applying a pulse of energy comprises applying the pulse to only a portion of the buried weakened ~~layer~~ zone.

3. (Previously presented) The method according to claim 2, wherein the pulse of energy comprises a localized thermal provision.

4. (Previously presented) The method according to claim 2, wherein applying a pulse of energy comprises applying the pulse in the form of a single brief movement of small amplitude by means of a tool.

5. (Previously presented) The method according to claim 2, wherein applying the pulse of energy comprises shocking a peripheral zone of the buried weakened zone.

6. (Previously presented) The method according to claim 1, wherein applying a pulse of energy comprises applying a controlled energy pulse globally to the source substrate.

7. (Previously presented) The method according to claim 1, wherein applying a pulse of energy comprises applying a pulse at a temperature of no more than about 300°C.

8. (Previously presented) The method according to claim 7, wherein applying a pulse comprises applying the pulse at room temperature.

9. (Previously presented) The method according to claim 1, wherein applying a pulse of energy comprises conducting a heat treatment so that the area opened up by the defects is from 25% to 32% of the total area of the weakened area in the substrate.

10. (Previously presented) The method according to claim 9, wherein applying a heat treatment comprises conducting the heat treatment so that the density of the defects is from 0.03 to 0.035 per square micron.

11. (Previously presented) The method according to claim 9, wherein applying a heat treatment comprises conducting the heat treatment so that the size of the defects is on the order of 7 to 8 square microns.

12. (Previously presented) The method according to claim 1, wherein apply the stiffener comprises applying the stiffener at or before the moment of applying the heat treatment, and wherein the stiffener comprises a target substrate, the heat treatment contributing to improving the bonding energy between source substrate and the target substrate.

13. (Previously presented) The method according to claim 12, wherein the target substrate comprises an amorphous material.

14. (Previously presented) The method according to claim 12, wherein the source substrate comprises silicon and the target substrate comprises fused silica.

15. (Previously presented) The method according to claim 12, wherein the target substrate comprises a monocrystalline or polycrystalline material.

16. (Previously presented) The method according to claim 15, wherein the target substrate comprises silicon.

17. (Previously presented) The method according to claim 1, wherein the first species comprises hydrogen.

18. (Previously presented) The method according to claim 17, wherein the first species comprises singly ionized hydrogen H^+.

19. (Previously presented) The method according to claim 18, wherein implanting a first species comprises implanting at a dose on the order of at least about 10^{16} H/cm^2.

20. (Previously presented) The method according to claim 1 further comprising implanting a second species, at a second dose, wherein the second species occupies the defects generated by the first species.

21. (Previously presented) The method according to claim 20, wherein the first and second species are implanted at differing implant depths, and wherein the deeper implant is implanted first.

22. (Previously presented) The method according to claim 20, wherein implanting a second species second species ~~is~~ comprises implanting helium.

23. (Previously presented) The method according to claim 22, wherein implanting the second species comprises implanting at a dose less than the first dose.

24. (Previously presented) The method according to claim 1, wherein preparing a source substrate comprises preparing a substrate comprising one of semiconductors and insulators, monocrystalline, polycrystalline or amorphous materials.

25. (Previously presented) The method according to claim 24, wherein the source substrate comprises a group IV semiconductor.

26. (Previously presented) The method according to claim 25, wherein the source substrate comprises silicon.

27. (Previously presented) The method according to claim 24, wherein the source substrate comprises germanium.

28. (Previously presented) The method according to claim 24, wherein the source substrate comprises GaAs.

29. (Previously presented) The method according to claim 1, wherein applying a pulse of energy comprises performing a heat treatment at a temperature of 200°C to 400°C.

30. (Previously presented) The method according to claim 29, wherein the heat treatment is performed at a temperature of 300°C to 350°C.

31. (Previously presented) The method according to claim 29, wherein the heat treatment is performed for approximately 2 hours to 5 hours.

32. (Previously presented) The method according to claim 24 the source substrate comprises a type III-V semiconductor material.

33. (Previously presented) The method according to claim 32, wherein the source substrate comprises an insulator selected from the group consisting of $LiNbO_3$ and $LiTaO_3$.